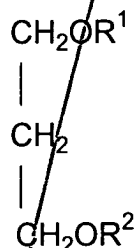


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96. A method of facilitating administration of a bioactive to the human body comprising administering to the body alone or in a pharmaceutical carrier or diluent a bioactive prepared in the form of a compound having the formula:



wherein R¹ is selected from the group consisting of fatty acid acyl groups of 12 to 30 carbon atoms and fatty alcohol groups of 12 to 30 carbon atoms, and wherein R² is the bioactive selected from the group consisting of fatty acid acyl groups of 12 to 30 carbon atoms and fatty alcohol groups of 12 to 30 carbon atoms, the same as or different from R¹, wherein the fatty acid acyl or alcohol groups R² are selected from the group consisting of γ -linolenic acid (GLA), dihomo- γ -linolenic acid (DGLA), arachidonic acid (AA), adrenic acid, stearidonic acid (SA), eicosapentaenoic acid (EPA), docosapentaenoic acid n-3, docosahexaenoic acid (DHA), columbinic acid (CA), parinaric acid and conjugated linoleic acid (cLA) groups.

97. The method according to claim 96, wherein each said fatty acid or fatty alcohol group has 16 to 30 carbon atoms.

98. The method according to claim 96, having a phosphate, succinate, or other difunctional-acid linking moiety between R¹ and the corresponding diol oxygen, between R² and the corresponding diol oxygen, or both.

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99. The method according to claim 96, wherein one of R¹ and R² is an acyl moiety corresponding to an acid selected from the group consisting of γ -linolenic acid (GLA) and dihomogamma-linolenic acid (DGLA), and the other of R¹ and R² is an acyl moiety corresponding to an acid selected from the group consisting of γ -linolenic acid (GLA), dihomogamma-linolenic acid (DGLA), stearidonic acid (SA), eicosapentaenoic acid (EPA), docosahexaenoic acid (DHA), conjugated linoleic acid (cLA), and columbinic acid (CA).

100. The method according to claim 96, wherein one of R¹ and R² is an acyl moiety corresponding to an acid selected from the group consisting of arachidonic acid (AA), and the other is an acyl moiety corresponding to an acid selected from the group consisting of arachidonic acid (AA), γ -linolenic acid (GLA), dihomogamma-linolenic acid (DGLA), docosahexaenoic acid (DHA), and eicosapentaenoic acid (EPA).

101. The method according to claim 96, wherein one of the R¹ and R² is an acyl moiety corresponding to eicosapentaenoic acid (EPA) and the other is an acyl moiety corresponding to an acid selected from the group consisting of eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA).

102. The method of claim 96 wherein R¹ and R² are pairs of fatty acids selected from the group of pairs of fatty acids consisting of:

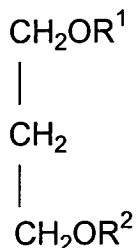
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~~γ-linolenic acid and oleic acid; γ-linolenic acid and γ-linolenic acid; eicosapentaenoic acid and eicosapentaenoic acid; γ-linolenic acid and eicosapentaenoic acid; γ-linolenic acid and docosahexaenoic acid; arachidonic acid and docosahexaenoic acid; arachidonic acid and eicosapentaenoic acid; γ-linolenic acid and arachidonic acid; γ-linolenic acid and stearidonic acid; stearidonic acid and docosahexaenoic acid; arachidonic acid and stearidonic acid; dihomο-γ-linolenic acid and dihomο-γ-linolenic acid; dihomο-γ-linolenic acid and γ-linolenic acid; dihomο-γ-linolenic acid and stearidonic acid; dihomο-γ-linolenic acid and arachidonic acid; dihomο-γ-linolenic acid and eicosapentaenoic acid; dihomο-γ-linolenic acid and docosahexaenoic acid; arachidonic acid and arachidonic acid; eicosapentaenoic acid and stearidonic acid; eicosapentaenoic acid and docosahexaenoic acid; docosahexaenoic acid and docosahexaenoic acid; conjugated linoleic acid and conjugated linoleic acid, conjugated linoleic acid and γ-linolenic acid; conjugated linoleic acid and dihomο-γ-linolenic acid; conjugated linoleic acid and arachidonic acid; conjugated linoleic acid and stearidonic acid; conjugated linoleic acid and eicosapentaenoic acid; conjugated linoleic acid and docosahexaenoic acid; columbinic acid and columbinic acid; columbinic acid and γ-linolenic acid; columbinic acid and dihomο-γ-linolenic acid; columbinic acid and arachidonic acid; columbinic acid and stearidonic acid; columbinic acid and eicosapentaenoic acid; and columbinic acid and docosahexaenoic acid.~~

103. The method according to claim 102, wherein R¹ and R² are both docosahexaenoic acid moieties.

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104. The method according to claim 102, wherein R and R are both eicosapentaenoic acid moieties.

105. A method of treatment of cachexia in cancer patients comprising administering to a patient in need of same, alone or in an pharmaceutical diluent or carrier, an effective amount of a compound having the formula:



wherein R¹ is selected from the group consisting of fatty acid acyl groups of 12 to 30 carbon atoms and fatty alcohol groups of 12 to 30 carbon atoms, and wherein R² is selected from the group consisting of fatty acid acyl groups of 12 to 30 carbon atoms and fatty alcohol groups of 12 to 30 carbon atoms, the same as or different from R¹, the fatty acid or alcohol groups R² being selected from the group consisting of γ -linolenic acid (GLA), dihom- γ -linolenic acid (DGLA), arachidonic acid (AA), adrenic acid, stearidonic acid (SA), eicosapentaenoic acid (EPA), docosapentaenoic

acid n-3, docosahexaenoic acid (DHA), columbinic acid (CA), parinaric acid and conjugated linoleic acid (cLA) groups.

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106. The method according to claim 105, wherein each said fatty acid or fatty alcohol group has 16 to 30 carbon atoms.

107. The method according to claim 105, having a phosphate, succinate, or other difunctional-acid linking moiety between R^1 and the corresponding diol oxygen, between R^2 and the corresponding diol oxygen, or both.

108. The method according to claim 105, wherein one of R^1 and R^2 is an acyl moiety corresponding to an acid selected from the group consisting of γ -linolenic acid (GLA) and dihomo- γ -linolenic acid (DGLA), and the other of R^1 and R^2 is an acyl moiety corresponding to an acid selected from the group consisting of γ -linolenic acid (GLA), dihomo- γ -linolenic (DGLA), stearidonic acid (SA), eicosapentaenoic acid (EPA), docosahexaenoic acid (DHA), conjugated linoleic acid (cLA), and columbinic acid (CA).

109. The method according to claim 105, wherein one of R^1 and R^2 is an acyl moiety corresponding to an acid selected from the group consisting of arachidonic acid (AA), and the other is an acyl moiety corresponding to an acid selected from the group consisting of arachidonic acid (AA), γ -linolenic acid (GLA), dihomo- γ -

linolenic acid (DGLA), docosahexaenoic acid (DHA), and eicosapentaenoic acid (EPA).

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110. The method according to claim 105, wherein one of the R¹ and R² is an acyl moiety corresponding to eicosapentaenoic acid (EPA) and the other is an acyl moiety corresponding to eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA).

111. The method according to claim 105 wherein R¹ and R² are pairs of fatty acids selected from the group of pairs of fatty acids consisting of:

~~γ -linolenic acid and oleic acid; γ -linolenic acid and γ -linolenic acid; eicosapentaenoic acid and eicosapentaenoic acid; γ -linolenic acid and eicosapentaenoic acid; γ -linolenic acid and docosahexaenoic acid; arachidonic acid and docosahexaenoic acid; arachidonic acid and eicosapentaenoic acid; γ -linolenic acid and arachidonic acid; γ -linolenic acid and stearidonic acid; stearidonic acid and docosahexaenoic acid; arachidonic acid and stearidonic acid; dihomogamma-linolenic acid and dihomogamma-linolenic acid; dihomogamma-linolenic acid and γ -linolenic acid; dihomogamma-linolenic acid and stearidonic acid; dihomogamma-linolenic acid and arachidonic acid; dihomogamma-linolenic acid and eicosapentaenoic acid; dihomogamma-linolenic acid and docosahexaenoic acid; arachidonic acid and arachidonic acid; eicosapentaenoic acid and stearidonic acid; eicosapentaenoic acid and docosahexaenoic acid; docosahexaenoic acid and docosahexaenoic acid; conjugated linoleic acid and conjugated linoleic acid, conjugated linoleic acid and γ -linolenic acid; conjugated linoleic acid and dihomogamma-linolenic acid; conjugated linoleic acid and arachidonic acid; conjugated linoleic acid~~

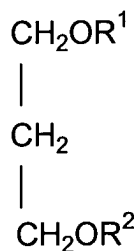
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and stearidonic acid; conjugated linoleic acid and eicosapentaenoic acid; conjugated linoleic acid and docosahexaenoic acid; columbinic acid and columbinic acid; columbinic acid and γ -linolenic acid; columbinic acid and dihomogamma-linolenic acid; columbinic acid and arachidonic acid; columbinic acid and stearidonic acid; columbinic acid and eicosapentaenoic acid; and columbinic acid and docosahexaenoic acid.

112. The method according to claim 111, wherein R^1 and R^2 are both docosahexaenoic acid moieties.

113. The method according to claim 111, wherein R^1 and R^2 are both eicosapentaenoic acid moieties.

114. A compound having the formula:



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wherein R^1 is selected from the group consisting of fatty acid acyl groups of 12 to 30 carbon atoms and fatty alcohol groups of 12 to 30 carbon atoms, and wherein R^2 is selected from the group consisting of fatty acid acyl groups of 12 to 30 carbon atoms and fatty alcohol groups of 12 to 30 carbon atoms, the same as or different from R^1 ,

the fatty acid acyl or alcohol groups R^2 being selected from the group consisting of γ -linolenic acid (GLA), dihomogamma-linolenic acid (DGLA), arachidonic acid (AA), adrenic acid, stearidonic acid (SA), eicosapentaenoic acid (EPA), docosapentaenoic acid n-3, docosahexaenoic acid (DHA), columbinic acid (CA), parinaric acid and conjugated linoleic acid (cLA) groups.

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115. The compound according to claim ~~114~~, wherein each said fatty acid or fatty alcohol group has 16 to 30 carbon atoms.

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116. The compound according to claim ~~114~~, having a phosphate, succinate, or other difunctional-acid linking moiety between R^1 and the corresponding diol oxygen, between R^2 and the corresponding diol oxygen, or both.

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117. The compound according to claim ~~114~~, wherein one of R^1 and R^2 is an acyl moiety corresponding to an acid selected from the group consisting of γ -linolenic acid (GLA) and dihomogamma-linolenic acid (DGLA), and the other of R^1 and R^2 is an acyl moiety corresponding to an acid selected from the group consisting of γ -linolenic acid (GLA), dihomogamma-linolenic acid (DGLA), stearidonic acid (SA), eicosapentaenoic acid (EPA), docosahexaenoic acid (DHA), conjugated linoleic acid (cLA), and columbinic acid (CA).

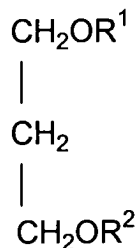
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118. The compound according to claim ~~114~~, wherein one of R^1 and R^2 is an acyl moiety corresponding to an acid selected from the group consisting of arachidonic

acid (AA), and the other is an acyl moiety corresponding to an acid selected from the group consisting of arachidonic acid (AA), γ -linolenic acid (GLA), dihomo- γ -linolenic acid (DGLA), docosahexaenoic acid (DHA), and eicosapentaenoic acid (EPA).

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119. The compound according to claim ~~114~~¹, wherein one of the R¹ and R² is an acyl moiety corresponding to eicosapentaenoic acid (EPA) and the other is an acyl moiety corresponding to an acid selected from the group consisting of eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA).

7
120. A pharmaceutical composition comprising an effective amount of the compound of claim ~~114~~¹ and a suitable diluent or carrier.

8
121. A compound according to claim ~~114~~¹ having the following 1,3-propane diol linked structure:



wherein R¹ and R² are pairs of fatty acids selected from the group of pairs of fatty acids consisting of:

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γ -linolenic acid and oleic acid; γ -linolenic acid and γ -linolenic acid; eicosapentaenoic acid and eicosapentaenoic acid; γ -linolenic acid and eicosapentaenoic acid; γ -linolenic acid and docosahexaenoic acid; arachidonic acid and docosahexaenoic acid; arachidonic acid and eicosapentaenoic acid; γ -linolenic acid and arachidonic acid; γ -linolenic acid and stearidonic acid; stearidonic acid and docosahexaenoic acid; arachidonic acid and stearidonic acid; dihomo- γ -linolenic acid and dihomo- γ -linolenic acid; dihomo- γ -linolenic acid and γ -linolenic acid; dihomo- γ -linolenic acid and stearidonic acid; dihomo- γ -linolenic acid and arachidonic acid; dihomo- γ -linolenic acid and eicosapentaenoic acid; dihomo- γ -linolenic acid and docosahexaenoic acid; arachidonic acid and arachidonic acid; eicosapentaenoic acid and stearidonic acid; eicosapentaenoic acid and docosahexaenoic acid; docosahexaenoic acid and docosahexaenoic acid; conjugated linoleic acid and conjugated linoleic acid, conjugated linoleic acid and γ -linolenic acid; conjugated linoleic acid and dihomo- γ -linolenic acid; conjugated linoleic acid and arachidonic acid; conjugated linoleic acid and stearidonic acid; conjugated linoleic acid and eicosapentaenoic acid; conjugated linoleic acid and docosahexaenoic acid; columbinic acid and columbinic acid; columbinic acid and γ -linolenic acid; columbinic acid and dihomo- γ -linolenic acid; columbinic acid and arachidonic acid; columbinic acid and stearidonic acid; columbinic acid and eicosapentaenoic acid; and columbinic acid and docosahexaenoic acid.

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~~122.~~ The compound according to claim ~~121~~, wherein R^1 and R^2 are both docosahexaenoic acid moieties.

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~~123~~. The compound according to claim ⁸~~121~~, wherein R¹ and R² are both
eicosapentaenoic acid moieties.

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~~124~~. A pharmaceutical composition comprising an effective amount of the
compound of ⁸~~121~~, ⁹~~122~~ or ¹⁰~~123~~ and a suitable diluent or carrier.
